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Patent

Attorney's Docket No. 42P11893D
In re the Application of: Chesser et al.
Application No.: 10/648,170
Filed: August 26, 2003
For: MODULAR CAPILLARY PUMPED LOOP COOLING SYSTEM
(title)

Mail Stop Amendment
Commissioner For Patents
P.O. Box 1450
Alexandria, Virginia 22313-1450

SIR/MADAM: Transmitted herewith is an election and amendment for the above application.

Applicant claims small entity status. See 37 CFR 1.27.
No additional claims fee is required.
OTHER -

The fee has been calculated as shown below:

| | (Col. 1) | | (Col. 2) | (Col. 3) |
|------------------|--|-------|---------------------------------------|------------------|
| | Claims Remaining After Amd. | | Highest No. Previously Paid For | Present Extra |
| Total Claims | 12 | Minus | 20 | 0 |
| Indep. Claims | 2 | Minus | *** 3 | 0 |
| | First Presentation of Multiple Dependent Claim(s) | | | |

- * If the entry in Col. 1 is less than the entry in Col. 2, write "0" in Col. 3.
** If the "Highest No. Previously Paid For" IN THIS SPACE is less than 20, write "20" in this space.
*** If the "Highest No. Previously Paid For" IN THIS SPACE is less than 3, write "3" in this space. The "Highest No. Previously Paid For" (Total or Independent) is the highest number found from the equivalent box in Col. 1 of a prior amendment or the number of claims originally filed.

| SMALL ENTITY | |
|-------------------|-------------------|
| Rate | Additional Fee |
| X25 | \$ |
| X100 | \$ |
| +180 | \$ |
| Total Add. Fee | \$ |

| OTHER THAN A SMALL ENTITY | |
|------------------------------|-------------------|
| Rate | Additional Fee |
| X50 | \$ 0 |
| X200 | \$ 0 |
| +360 | \$ 0 |
| Total Add. Fee | \$ 0.00 |

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on October 5, 2007
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Signature

October 5, 2007
Date

SECTION II—CLAIMS

³¹
1.-30. (Canceled)

Rule 12b
³²
~~31.~~ (New) A condenser, comprising:

a single coil of tubing having a helical configuration and including an inlet port to receive a working fluid in a vapor state and an outlet port from which the working fluid exits the condenser in a liquid state; and

a plurality of fins disposed about a centerline of the single coil of tubing. 

³³
~~32.~~ (New) The condenser of claim ³²~~31~~, further comprising a low-profile centrifugal fan disposed within the single coil of tubing and operatively coupled to the single coil of tubing, said low-profile centrifugal fan including a motor coupled to a fan rotor comprising a plurality of fan blades that when rotated by the motor cause air to flow over the plurality of fins to assist in removing heat from the condenser.

³⁴
~~33.~~ (New) A thin-profile condenser, comprising:

a cover plate;

a channeled base member having an external wall extending around a periphery thereof to which the cover plate is secured so as to define a sealed cavity, and further including at least one internal wall including a portion disposed substantially adjacent to a portion of the external wall so as to define a capillary channel, said at least one internal wall dividing the sealed cavity into a condensing region and the capillary channel;

a vapor inlet port to receive a working fluid in a vapor state operatively coupled to the sealed cavity; and

a first liquid outlet port from which the working fluid exits the condenser, operatively coupled to an outlet end of the capillary channel.

³⁵
~~34.~~ (New) The thin-profile condenser of claim ³⁴~~33~~, further comprising a charge port operatively coupled to the condenser to enable the condenser to be charged with the working fluid.

³⁶
~~35.~~ (New) The thin-profile condenser of claim ³⁴~~33~~, further comprising a hole extending through the condensing region.

³⁷
~~36.~~ (New) The thin-profile condenser of claim ³⁴~~33~~, wherein said at least one internal wall includes wall portions that are configured so as to thermally isolate the capillary channel from the condensing region.

³⁸
~~37.~~ (New) The thin-profile condenser of claim ³⁴~~33~~, wherein said at least one internal wall includes portions that are configured symmetrically so as to form a centrally-disposed condensing region connected to a first capillary channel disposed on a first side of the condensing region and a second capillary channel disposed on a second side of the condensing region opposite of the first side.

³⁹
~~38.~~ (New) The thin-profile condenser of claim ³⁴~~33~~, further comprising a second liquid outlet port operatively coupled to an outlet end of the second capillary channel.

⁴⁰
~~39.~~ (New) The thin-profile condenser of claim ³⁴~~33~~, further comprising a plurality of post disposed within the condensing region extending between the channeled base member and the cover plate.

⁴¹
~~40.~~ (New) The thin-profile condenser of claim ³⁴~~33~~, further comprising a heatsink thermally coupled to the cover plate.

42
41.

(New) The thin-profile condenser of claim ~~40~~⁴¹, wherein the heatsink comprises a base plate having a plurality of pins extending upward therefrom.

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42.

(New) The thin-profile condenser of claim ~~40~~⁴¹, further comprising a centrifugal fan including an annular fan rotor having a plurality of fan blades disposed around a periphery of the heatsink so as to draw air across the heatsink when rotated.